

Determination of a *Candida albicans* antigen using an amperometric immunoenzyme sensor | Opređenje antigena *Candida albicans* s pomošću amperometričkog imunofermentnog sensora.

Kutyreva M., Mediantseva E., Khaldeeva E., Glushko N., Budnikov G.

Kazan Federal University, 420008, Kremlevskaya 18, Kazan, Russia

Abstract

Determination new variant enzyme immunoassay with amperometric enzyme immunosensor, including the immobilizing enzyme-choline esterase and antibodies against *Candida albicans* (CA) in biosensitivity part of sensor, for diagnose disease of CA. The method for determination of CA based on combination immunochemical reactions and voltammetric indication of analytical signal was developed. Amperometric enzyme immunosensor developed has been used as detector. Differences dilutions of antibody (Ab) against antigen (Ag) of CA immobilizing in common with choline esterase (CE). The method of immobilization developed allows to receive the sensor with including the immobilized CE and Ab in common. The method of determination of CA based on combination the reaction of forming immune complex tAb-AgI with enzyme immunosensor for its detection. The dynamic range of concentrations determined of Ag depends on degree of dilution of Ab used for manufactory biosensitivity part of sensor. The data indicate that the [Ab-Ag] immune complexes are stable. This is also confirmed by the values of [Ab-Ag] binding constants, obtained in Scatchard coordinates. This method of determination doesn't require special preparation of a sample. Selectivity, sensitivity, simplicity and quickness are characterize of this method which could be used for manufacturing test-sistem for determination CA in blood.
